

Docket No. 287600US0X PCT

10/572749

RECEIVED 21 MAR 2006

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Michiyasu KOMATSU, et al.

SERIAL NO: New U.S. PCT Application Based on PCT/JP04/14529

GAU:

FILED: Herewith

EXAMINER:

FOR: WEAR RESISTANT MEMBER COMPRISED OF SILICON NITRIDE AND PROCESS FOR PRODUCING THE SAME

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s), published application(s) or issued patent(s) which may be related to the present application. In accordance with the waiver of 37 CFR 1.98 dated September 21, 2004, copies of the cited pending applications are not provided. Cited published and/or issued patents, if any, are listed on the attached PTO form 1449.
- ☐ A check or credit card payment form is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 287600US0X PCT		SERIAL NO. 2005/2149		
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Michiyasu KOMATSU, et al.				
				FILING DATE Herewith			GROUP	
U.S. PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE	
	AA							
	AB							
	AC							
	AD							
	AE							
	AF							
	AG							
	AH							
	AI							
	AJ							
	AK							
	AL							
	AM							
	AN							
FOREIGN PATENT DOCUMENTS								
		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION YES NO			
	AO	2003-34581	02/07/03	JP		NO		
	AP	2002-68846	03/08/02	JP (equivalent of US2002/98966)		NO		
	AQ	6-135771	05/17/94	JP (equivalent of US5439856)		NO		
	AR	7-118070	05/09/95	JP		NO		
	AS	9-20563	01/21/97	JP		NO		
	AT	9-142935	06/03/97	JP		NO		
	AU							
	AV							
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)								
	AW							
	AX							
	AY							
	AZ					<input type="checkbox"/> Additional References sheet(s) attached		
Examiner					Date Considered			
*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.								

New U.S. PCT Application Based on PCT/JP04/14529

Michiyasu KOMATSU, et al.

Docket No. 287600 US

STATEMENT OF RELEVANCY

- 1) References AO - AQ have been cited in the International Search Report. A copy of these references is being submitted herewith.
- 2) References have been cited in the corresponding Search Report. A copy of these references is being submitted herewith.
- 3) References are discussed in the specification. A copy of these references is being submitted herewith.
- 4) References AR - AT are additional prior art known to Applicant. A copy of these references is being submitted herewith.

AR: JP 7-118070

"Silicon Nitride Ceramic Sintered Body", IKEDA et al., Japanese Patent Application Laid-Open (unexamined) No. HEI 7-118070. Filing Date: October 25, 1993. Publication Date: May 9, 1995.

This prior art discloses that a ceramic mixture containing 0.5-6 wt.% of MgO. Al₂O₃ spinel structure, 0.1-20 wt.% of silicon carbide, 1 wt% or less of silicon oxide and balance essentially silicon nitride is sintered to provide the objective silicon nitride sintered body used for bearing materials comprising: 0.1-1.5 wt.% of Mg, 0.1-2.5 wt.% of Al, 0.01-6 wt.% of C, 0.2-5 wt.% of O and balance of Si and N with impurities as constituent elements.

AS: JP9-20563

"Silicon Nitride Sintered Body", TAKAO et al., Japanese Patent Application Laid-Open (Unexamined) No. HEI 9-20563. Filing Date: June 30, 1995. Publication Date: January 21, 1997.

This prior art discloses a silicon nitride sintered body used for bearing materials comprising: 0.1-1.5 wt.% of Mg, 0.1-3 wt. % of Al, 0.01-6 wt% of C, 0.2-5 wt.% of O as constituent elements and the remaining part essentially composed of silicon nitride.

AT: JP9-142935

“Silicon Nitride Sintered body and Method of Manufacturing the same”, Masahiro SATOH et al., Japanese Patent Application Laid-Open (unexamined) No. HEI 9-142935. Filing Date: November 24, 1995. Publication Date: June 3, 1997.

This prior art discloses a silicon nitride sintered body used for bearing materials containing: silicon nitride (Si_3N_4), oxide of rare earth element, aluminum oxide (Al_2O_3), magnesium oxide (MgO) and silicon oxide (SiO_2).

As inventor Michiyasu Komatsu states, the silicon nitride sintered body to be used as the bearing materials according to the present invention is not disclosed in any of the above prior arts.